13. (Amended) A method according to claim 1, comprising stopping said ray casting if said accumulated opacity is over a threshold.

14. (Amended) A method according to claim 1, wherein said sampling points are separated by a step size and wherein said step size is dependent on the opacity value at the sampling points.

18. (Amended) A method according to claim 1, comprising providing a definition of voxel value intervals for each class, prior to said ray casting.

19. (Amended) A method according to claim 1, comprising:

interpolating between voxels near said point; and

transforming said interpolated voxel value into an opacity value for said point.

22. (Amended) A method according to claim 1, wherein said predetermining location is within the voxel space.

23. (Amended) A method according to claim 1, wherein said voxel data set comprises a medical imaging data set.

24. (Amended) A method according to claim 1, wherein (g) comprises:

sparely casting rays; and

determining if to cast at least one additional ray between cast rays.

27. (Amended) A method according to claim 25, wherein statistical homogeneity is determined with respect to depth factors associated with the ray.

28. (Amended) A method according to claim 1, wherein (h) comprises interpolating between stored values of cast rays.

29. (Amended) A method according to claim 1, wherein (g) comprises progressively increasing the density of raycasting.

32. (Amended) A method according to claim 1, comprising rendering said formed perspective rendering on a display.

33. (Amended) A method according to claim 1, comprising defining a window in or near the voxel space through which to cast said rays.

35. (Amended) A method according to claim 33, wherein said window is flat and rectangular.

36. (Amended) A method according to claim 33, wherein said window is curved.

37. (Amended) A method according to claim 33, wherein said window is defined by pixels in a uniformly spaced rectangular grid.

38. (Amended) A method according to claim 33, wherein said window is defined by pixels using coordinates which are one of circular coordinates, elliptical coordinates and another conic projection of coordinates.

39. (Amended) A method according to claim 1, wherein said accumulation of opacity comprises updating a storage value CT as follows: CT=CT*T^step_size, where T is a transparency value corresponding to the opacity value.

40. (Amended) A method according to claim 1, wherein said rays are cast in parallel.

41. (Amended) A method according to claim 1, wherein the voxel data set is generated by one of CT (Computerized Tomography), MRI (Magnetic Resonance Imaging), Ultrasound, a geophysical survey, a meteorological survey, a scientific simulation, an animation model having more than two dimensions and a set of simultaneous equations.

42. (Amended) A method according to claim 1, wherein each voxel has associated therewith a visual representation value and comprising:

determining a visualization value associated with a sampled point from the voxel associated visual representation values; and

accumulating said point associated visualization value into said stored value.

45. (Amended) A method according to claim 42, wherein accumulating said point associated visualization values comprises selectively accumulating values based on front surface detection.

46. (Amended) A method according to claim 42, wherein said point associated visualization value comprises a volume lighting value.

47. (Amended) A method according to claim 42, wherein said point associated visualization value comprises a surface lighting value.

48. (Amended) A method according to claim 1, wherein advancing along a ray is coordinated with an opacification process.

49. (Amended) Apparatus for forming a perspective rendering from a voxel space including:

(a) a memory for storing a voxel data set;

(b) a computer processor for applying the method of claim 1 to said stored data set to form said perspective rendering; and

(c) a second memory for storing said formed perspective rendering.